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# **U. S. Department of Energy**

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## **The Handbook for Senior Technical Safety Manager Positions**



**Washington, D.C. 20585**

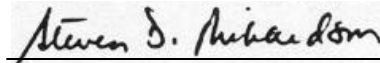
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## **The Handbook for Senior Technical Safety Manager Positions**

The Handbook for Senior Technical Safety Manager positions was developed as a companion document to the Senior Technical Safety Manager Functional Area Qualification Standard. This Handbook outlines a process, defines roles and responsibilities, and provides guidance to be used when assessing the competency of incumbents and applicants for Senior Technical Safety Manager positions. The guidance contained in this document is intended to complement local merit staffing procedures, the provisions of which still apply.

This document is issued on an interim basis under the authority of the Federal Technical Capability Panel chartered by the Deputy Secretary of Energy. The requirements contained in this document are being included in the Federal Technical Capability Program Manual. This manual will be entered in the Department Directives System.

**Approved by:**



S.D. Richardson, Chair  
Federal Technical Capability Panel

## **TABLE OF CONTENTS**

<b>Introduction</b>	<b>1</b>
<b>Background</b>	<b>1</b>
<b>Roles and Responsibilities</b>	
Federal Technical Capability Panel	3
Operations Office Managers and Principal Secretarial Officers	3
Federal Technical Capability Agents	4
Executive Review Board	4
<b>Monitoring Senior Technical Safety Manager Positions</b>	<b>4</b>
<b>Filling Senior Technical Safety Manager Positions</b>	
Background and Experience Guidelines	5
Position Descriptions	6
Incumbent Knowledge and Experience Determination	6
STSM Vacancy Announcements	8
Hiring Process	9
<b>Compensatory / Alternative Measures</b>	<b>9</b>
<b>Qualification Process</b>	
Qualification Standards	11
Implementation for Newly Selected Senior Technical Safety Managers	11
Records	11

## **Introduction**

The Department's most critical objective is to ensure that work is done safely and efficiently with regard to public health, worker safety and the environment. Senior Technical Safety Managers (STSMs) are key to meeting this objective.

By definition, a STSM is that person, usually at the GS/GM-15 or Senior Executive Service (SES) level, who is assigned the direct responsibility for activities impacting the safe operation of defense nuclear facilities including:

- Managing technical programs and associated resources.
- Providing assistance, direction, guidance, oversight, or evaluation of contractor technical activities.

It is imperative that STSMs be technically competent as well as good managers. Selecting STSMs is a complex process. There are no absolutes in the selection process; however, there are several attributes that are common to successful managers of technical programs. There are also several methods that have proven successful in recruiting the best talent available for these positions.

This Handbook provides guidance to be used when selecting applicants, or assessing the competency of incumbents for STSM positions. This guidance is intended to complement local merit staffing procedures, the provisions of which still apply. The Lead Program Secretarial Officers (LPSOs), Principal Secretarial Officers (PSOs) and Field Element Managers (FEMs) are encouraged to adopt a formal process, similar to that described in this Handbook, to ensure that personnel selected for STSM positions have the highest level of technical competence obtainable. This handbook also defines mechanisms for independent monitoring of LPSO/PSO/FEM implementation of the STSM program.

## **Background**

At the Joint Department of Energy/Defense Nuclear Facilities Safety Board Off-Site Conference, June 13-14, 1996, a number of actions were taken by the Department. Two of those actions related specifically to the implementation of a formal program for STSMs.

The first of the two actions required the identification of STSM

positions followed by the evaluation of incumbents in those positions against specific technical competencies. To accomplish this action, a Federal Technical Work Force Review Group was formed. This group of senior line managers from across the Department used input from the FEMs, PSOs, and LPSOs with defense nuclear facility responsibility to recommend a list of STSM positions to the Under Secretary for approval. Incumbents in these positions were then evaluated by their respective FEM/PSO/LPSO to ensure they possessed appropriate technical education, experience, and competencies requisite for the STSM position the incumbent held. Compensatory measures were established in cases where education or experience was lacking; training and developmental activities were structured when a competency was not met. The Federal Technical Workforce Review Group reviewed the documentation relating to the incumbents' qualifications, any compensatory measures delineated by the organization, and provided advice to respective FEMs, PSOs, and LPSOs as appropriate. The result of this effort was the initial list of departmental STSM positions with associated incumbent names.

The other action resulting from the off-site conference was the reevaluation of the Technical Manager Qualification Standard (May 1995) to consider the inclusion of additional technical competencies. Based upon this reevaluation, the Technical Manager Qualification Standard was canceled in November 1997 and a new STSM Functional Area Qualification Standard was developed. The Standard was approved by the Technical Excellence Executive Committee on November 21, 1996, and issued for use in the qualification of individuals filling STSM positions.

The Department's revised Implementation Plan for Defense Nuclear Facilities Safety Board (DNFSB) Recommendation 93-3 (May 1998) required the formation of a Federal Technical Capability Panel (Panel). This Panel consists of senior line managers representing the field and program offices. These managers are called Federal Technical Capability Agents (Agents). The Panel has the responsibility of overseeing the implementation of the STSM program; the Agents with overseeing the implementation of their organization's STSM

and Technical Qualification programs.

**Roles and Responsibilities**

Federal Technical Capability Panel

The Panel was established in May 1998 as a part of the Department's revised Implementation Plan for DNFSB Recommendation 93-3. Included in the Panel's charter is the responsibility to oversee the implementation of the STSM Program across the Department. This includes:

- Approving additions or deletions to the Departmental list of STSM positions.
- Overseeing the process for evaluating the qualification of personnel filling STSM positions to ensure that these individuals meet the technical competency criteria.
- Providing, as necessary, feedback to the Deputy Secretary regarding the positions in the STSM Program and the qualification of personnel selected to fill those positions.
- Reviewing and approving the STSM Functional Area Qualification Standard and any other related selection or qualification requirements for STSMs.

Operations Office Managers and Principal Secretarial Officers

FEMs, PSOs, and LPSOs play a critical role in ensuring that the Department has adequate numbers of qualified STSMs. Specifically, they are responsible for:

- Identification of the STSM positions for their Office.
- Ensuring that the PSO (or the Principal Deputy PSO) and the Operations Office Manager (or Deputy Manager) at offices with cognizance over defense nuclear facilities, possess STSM technical qualifications.
- Ensuring that individuals filling STSM positions, whether incumbents or candidates for new or vacant positions, meet the technical competency criteria (only in rare cases shall compensatory measures be relied upon).
- Establishing a process to recruit, screen and hire competent technical personnel to fill STSM positions.
- Developing detailed office/facility-specific technical competencies for each of the STSM positions in their

organization.

**Federal Technical Capability Agents**

As previously mentioned, Agents were established as part of the Department's revised Implementation Plan for DNFSB Recommendation 93-3. These Agents, who make up the Panel, are senior line managers from each field and Headquarters office with defense nuclear facility responsibilities. They are designated by the FEM, PSO, or LPSO and have the responsibility for coordinating and overseeing the implementation of the Federal Technical Capability Program at their office. Specifically, they are responsible for:

- Assisting the FEM/PSO/LPSO in establishing a formal STSM Program for the organization.
- Facilitating recruitment to fill open positions with technically competent individuals.
- Concurring with STSM vacancy announcements to ensure the inclusion of adequate selection criteria.
- Representing, to the Panel, the office's justification regarding the identification and qualification of STSM incumbents.

**Executive Review Board**

- ◆ Ensuring that the PSO (or the Principal Deputy PSO) and the Operations Office Manager (or Deputy Manager) at offices with cognizance over defense nuclear facilities, possess STSM technical qualifications.

**Monitoring STSM Positions**

The initial list of STSM positions was approved and transmitted by the Under Secretary's memorandum of October 18, 1996. The Executive Secretary to the Panel maintains and publishes the approved list of STSM positions. The list of positions is periodically reviewed and updated by the Panel.

Changes will be communicated to the at least 30 days prior to being considered at a panel meeting. During this time, issues identified by other agents should be shared with the proposing office.

The panel will review changes to the STSM list. The Agent representing the change will brief any changes to the list to the

panel at the next panel meeting. The briefing will address any of the following that apply:

- Change in position title.
- Organizational change in position responsibilities.
- Addition or removal of a position from the list.
- Selection of a new incumbent for an STSM position.

Any concern raised by the Panel will be resolved to the satisfaction of the Panel. If resolution cannot be reached, the issue will be referred to the Deputy Secretary, the LPSO, and the PSO for their information and action, as appropriate.

**Filling STSM Positions**  
Background and Experience  
Guidelines

An applicant or incumbent in a STSM position shall possess a scientific or engineering degree with a major in an academic area that supports the functional responsibilities of the position.

Exceptions to this requirement should be considered only in rare circumstances, and then with a compensatory measure and in accordance with Office of Personnel Management qualification standards. An advanced technical degree is desirable. Professional credentials, i.e., Professional Engineer, and industry or governmental qualifications/certifications, i.e., Facility Representative experience, should weigh heavily in favor of the applicant or incumbent.

The applicant's resume or work history should show a demonstrated capability to manage technical issues in an integrated and systematic approach at the level that the position requires. For example, for a management position that is narrow in scope with significant detail work, the applicant shall have a level of expertise close to that of a subject matter expert. For a management position that is very broad in scope, applicants shall possess an interdisciplinary background and have demonstrated technical competence at a previous point in their careers. In both cases, direct operational experience should be requisite. For supervisory or managerial positions, applicants should also have demonstrated leadership skills. Additionally, an applicant should have three or more years experience in an equivalent position or a position one level



below the position for which the applicant has applied.

In summary, both demonstrated technical expertise and managerial skills are necessary for STSM positions.

Position Descriptions

Position descriptions for STSMs must clearly identify the position as being a STSM position, and be written to ensure that the requisite education, experience and requirements are included. STSM position descriptions must reflect the prerequisites of:

- A technical degree.
- Three or more years of experience in the technical work area(s) related to the position.
- Recognition as a subject matter expert in a technical area.

To ensure the integration of safety management within the organization, incumbent STSMs should be used as subject matter experts to assist the servicing Human Resource office in developing the position descriptions. The Agent representing the Office should additionally review and concur with the STSM position descriptions for the office.

Incumbent Knowledge and Experience Determination

In the event that an existing position is identified as an STSM position, the incumbent in the position must be evaluated to determine if he/she meets the technical prerequisites of the position. In addition to verifying that the individual meets the education and experience requirements of the position, the extent of the individual's understanding of safety management concepts and issues should be determined. This may be accomplished through interviews conducted by experienced supervisors or by an interview board consisting of individuals with strong safety management backgrounds. The FEM, PSO, or LPSO could also accomplish an extensive documentation review and/or interview. If interviews are performed they should include the following kinds of questions plus those facility specific safety questions relating directly to the STSM position.

- Why are Safety Analysis Reports (SARs) written?
- What is done with the SARs after they are written and

approved?

- What are "Requirements" and how do they compare to regulations and rules?
- How are requirements translated into policies, plans and procedures?
- What is a "Safety Envelope?"
- How does the "Safety Envelope" influence design and operation?
- What is the significance of "Conduct of Operations" principles?
- How do the Systematic Approach to Training, qualifications and personnel certifications relate to operations?
- Define what is meant by Line Management responsibility for safety.
- What is defense in depth? How does it apply to high risk facilities?
- What is the role of Unreviewed Safety Questions in safety management?
- What are examples of significant OSHA requirements?
- How does one balance safety, security, fire and emergency procedures?
- Explain how all of the various aspects of safety management interact and fit together to form a safety culture.

It is imperative that the interview be structured in a manner to provide adequate knowledge so that upon interview completion the subject matter expert conducting the interview has full confidence in the STSM. The interviewer must have complete faith that the STSM has sufficient relevant knowledge to carry out the duties and responsibilities associated with the position.

Upon determination that the concepts of safety management

are understood and that the individual's experience is sufficient to qualify for a STSM position, the competencies of the STSM Qualification Standard are then used to develop training and qualification records. These records may take the form of technical qualification records, Individual Development Plans or similar documents. They are designed to ensure that an STSM acquires and maintains qualifications necessary to support departmental safety management concerns in relation to the STSM position he/she holds.

STSM Vacancy  
Announcements

Vacancy announcements should identify the position as a STSM position. The announcement should fully reflect the requirements of the position based on the guidelines in this handbook, the position description, and specific technical requirements associated with the job. Well-written vacancy announcements, including specialized experience and skill requirements, will help ensure that applications are received from people with the requisite technical skills. The vacancy announcement should be posted over a wide geographic area. This can be accomplished through the use of advertisements in professional publications, newspapers, and other proven means to attract a diverse pool of highly qualified applicants. The crediting plan should be written to include the specific education, experience and technical competencies required of the position to ensure that the most qualified individual is selected.

Incumbent STSMs should be used as subject matter experts to assist the servicing Human Resources office in developing the vacancy announcement and the crediting plan. The Agent representing the office should review and concur with the vacancy announcement and crediting plan prior to the position being posted.

Hiring Process

The FEM/PSO/LPSO responsible for hiring the applicant should ensure that a thorough review of each applicant's credentials is conducted using a centrally managed screening process as described in the following paragraphs. For the purpose of this handbook, hiring also includes transfers and promotions.

Human Resources office personnel, with assistance from qualified STSMs, should evaluate the applications to develop a

list of candidates who clearly meet the position requirements. Successfully screened applicants should then be further reviewed under the direction of the FEM/PSO/LPSO. A suggested process is as follows:

- The FEM/PSO/LPSO should consider establishing a review board comprising individuals who themselves meet the selection criteria for STSM positions. The Agent should always be a member of the review process/board. If the Agent is a candidate for the position, another Agent should be included.
- Regardless of whether or not a review board is used, the review process should include comprehensive interviews with the applicants, verification of resumes, and evaluations from previous employers to validate technical knowledge, managerial competence, and operational experience.
- Interviews should include an evaluation of the applicant's technical and operational competence, understanding of integrated safety management principles, experience in dealing with a technical work force, breadth of interdisciplinary background, and leadership and management skills.
- In addition to interviews, the selecting official should conduct comprehensive reference checks.
- The process should conclude with the FEM/PSO/LPSO or Agent reviewing and interviewing those applicants considered to be the best qualified.

### **Compensatory and Alternative Measures**

There may be situations where the incumbent in an identified STSM position does not meet the education or experience requirements contained in the STSM Qualification Standard. In these cases, management has various options to address, or compensate, for this situation. In developing and implementing compensatory measures, it should be recognized that management has the responsibility to create a situation where there is an unbroken chain of fully qualified STSMs in positions of authority. Various examples for compensatory measure options include:

- Maintain the incumbent in the respective position and have

a fully qualified STSM assigned to the office to be responsible for the technical aspects of decisions. This may be advisable in situations where the incumbent in the position is in place to address administrative or legal issues. This option may also be desirable to address situations where the incumbent is a political appointee.

- Clearly identify through changes in the position description, that the incumbent in the position does not make final decisions on technical issues. Document that a member of the individual's staff, e.g., Deputy or senior staff officer, is responsible for the technical aspects of decision making for the work unit. Include that the non-technical STSM overlays administrative, legal or other implications, without changing the technical decisions of the work unit. Resolution of conflicts, regarding the handling of technical issues, between the two individuals would be referred to the next senior qualified STSM in the office.
- Provide training and development support to the individual that would eventually allow the individual to qualify as a Senior Technical Safety Manager.
- Request that the Deputy Secretary review the STSM's qualifications, and the organizational situation, to determine if the situation dictates an exception to policy. In cases such as this, the Deputy Secretary must find that due to the unique qualifications of the incumbent and the duties of the position, the individual--although not meeting the strict requirements of the STSM Qualification Standard--should remain in the position in that the individual's unique qualifications contribute to and ensure safety.
- Reassign the individual to a position that does not require the individual to qualify as a STSM.

**Qualification Process**  
Qualification Standards

The STSM Qualification Standard applies to all Department STSMs identified in the approved list maintained by the Panel. This standard contains the minimum competencies that all STSMs should possess. Additional competencies specific to the office or facility for which the STSM is responsible should also be considered. Personnel designated as STSMs are participants in the Technical Qualification Program and are

required to satisfy the requirements of the program as defined by DOE Order 360.1, *Training*.

Implementation for Newly  
Selected Senior Technical  
Safety Managers

Personnel should be hired, transferred or promoted into STSM positions using the process described in the section above, **Filling STSM Positions.** Upon being placed in the position, they shall complete the requirements identified in the STSM Qualification Standard, and any other local requirements established for the position.

Qualification Records

Training and qualification records shall be maintained for STSMs as defined by DOE Order 360.1, *Training*.